



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,094	02/13/2002	Lysander Lim	SILA:074	7260

7590

06/20/2005

O'KEEFE, EGAN & PETERMAN, L.L.P.  
Building C  
Suite 200  
1101 Capital of Texas Highway South  
Austin, TX 78746

EXAMINER

GESESSE, TILAHUN

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/075,094

Applicant(s)

LIM ET AL.

Examiner

Tilahun B Gesesse

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/603, 9/02/03 and 11/2004</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Status of claims

1. This is in response to applicant's election to restriction/election requirement filed January 7, 2005, in which claims 1-9 have been canceled and claims 10-45 are pending.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 10-21,22-25 and 32-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Meador et al (US patent No 5m584,062)" Meador"

Regarding claims 10,32,34 Meador discloses a radio-frequency (RF) transmitter circuit (see figure 8), comprising:

Meador discloses a controlled oscillator circuit (210 of figure 2) adapted to provide an output signal with variable frequency in response to a plurality of control signals (vout ) and a signal generator circuit (218 and 206) adapted to generate the plurality of control signals having respective levels that are an input control signal (fref and loop voltage ) wherein a radio-frequency output signal of the transmitter circuit is derived from the output signal of the controlled oscillator circuit progressive offset between input voltage and output voltage (column 4, lines 10-35 and figure 2).

Regarding claims 11,33,35 Meador discloses plurality of voltage sources (218 and 206), each of the plurality of voltage sources configured to generate a respective one of the plurality of control signals (column 4, lines 10-35 and figure 2).

Regarding claims 12,36, Meador discloses the plurality of voltage sources are coupled in series (218 and 206) column 4, lines 10-35 and figure 2)

Regarding claims 13,37, Meador discloses the input control signal comprises a voltage signal (column 4, lines 10-35 and figure 2)

Regarding claim 17, Meador discloses the signal generator circuit further comprises a plurality of voltage generator circuits, each of the plurality of voltage generator circuits comprising a current source coupled to a first terminal of a resistor (column 5, lines 59-column 56, line 8 and figure 6).

Regarding claim 22, Meador discloses an integrated circuit (see figure 2), comprising:

Meador discloses a controlled oscillator circuit ( 210) including: a continuously variable capacitor, (column 5, lines 60-68) the continuously variable capacitor having a capacitance value that varies in response to a plurality of control signals (column 5, lines 60-68) and a signal generator circuit adapted to generate the plurality of control signals based on a reference control signal, the signal generator circuit (218 and 206) further adapted to generate the plurality of control signals such that each control signal in the plurality of control signals differs from the reference control signal by a respective one of a plurality of offset values, wherein the integrated circuit has a radio-frequency

output signal derived from an output signal of the controlled oscillator circuit (column 4, lines 10-35 and figure 2)

Regarding claim 23. Meador inherently discloses the continuously variable capacitor comprises a plurality of variable capacitors coupled in parallel.

Regarding claim 24, Meador discloses each of the plurality of variable capacitors comprises a capacitor coupled to a variable impedance device (column 5, lines 60-68).

Regarding claim 25, Meador inherently discloses each of the plurality of control signals couples to a respective one of the plurality of variable impedance devices.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14-16, 18-21, 26-31 and 38-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meador in view of Newland (US patent No. 5,949,291).

Regarding claims 14-16, 18-21, Meador does not teach a plurality of resistors coupled in series. However, Newland teaches plurality of resistors in series and parallel (see figure 2). Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time of the invention was made to utilize a plurality of resistors in voltage control oscillator.

Regarding claim 26-31, Meador does not teach a plurality of resistors coupled in series. However, Newland teaches plurality of resistors in series and parallel (see figure 2). Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time of the invention was made to utilize a plurality of resistors in voltage control oscillator.

Regarding claims 38-45, Meador does not teach a plurality of resistors coupled in series. However, Newland teaches plurality of resistors in series and parallel (see figure 2). Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time of the invention was made to utilize a plurality of resistors in voltage control oscillator.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Borras et al (US patent No 4,,484,153) discloses a frequency synthesizer phase locked loop including a reference oscillator , a variable reference divider ( abstract).

Martin et al ( US patent no. 5,686,864) discloses VCO and various voltage sources (see abstract).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tilahun B Gesesse whose telephone number is 571-272-7879. The examiner can normally be reached on flex.

Art Unit: 2684

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
TILAHUN GESESSE  
PRIMARY EXAMINER